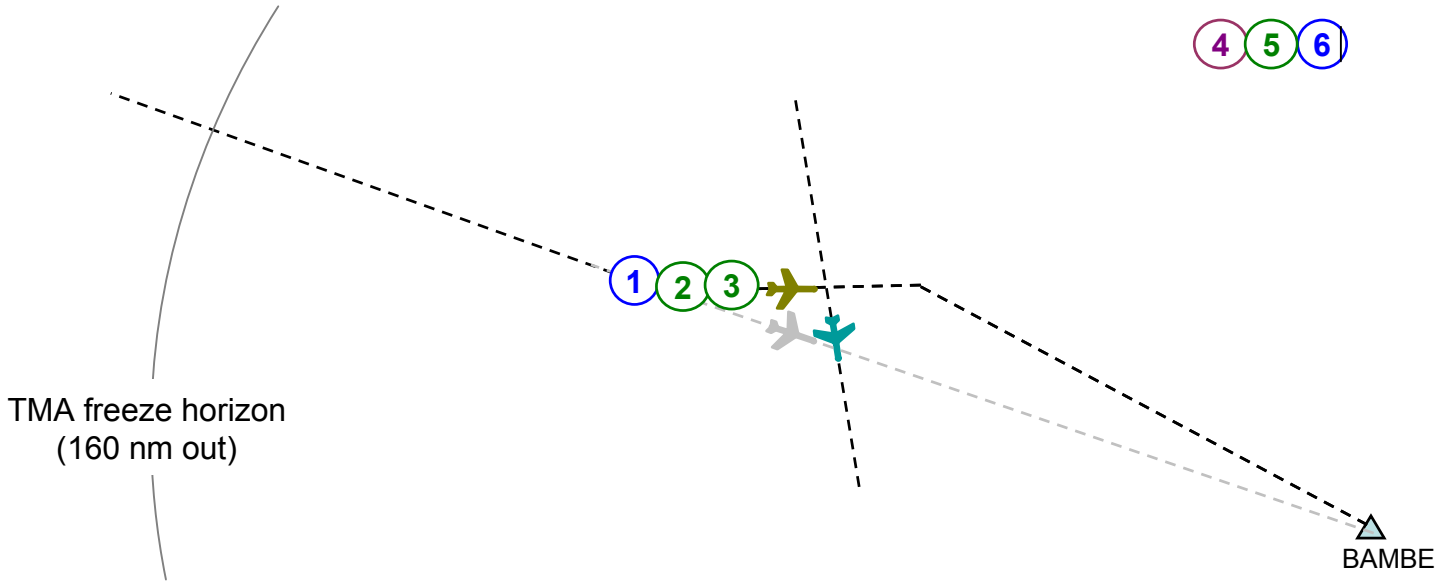
DAG Procedures for Discussion

1. Request (assign) new RTA (controller rescheduling process to be worked out…pair swaps, vs. new RTA, vs. resequencing
2. AFR arrival not meeting meter fix RTA (alt, or speed) constraint
   - Center controller - flight crew interaction
   - Center controller - TRACON controller interaction
3. AFR-to-IFR transition at meter fix
4. TRACON / CE-11 clearance timing (at or before meter fix)
   1. First IFR clearance (routing after BAMBE)
   2. Spacing clearance
5. Meter fix / runway threshold schedule relationship
   - (Includes) Impact of center re-sequencing on runway sequence
   - Alternatives: CTAS TMA schedule or runway threshold-based schedule
6. *Controller responsibilities & ground automation presentation of autonomous-managed conflicts*
7. *Auto handoff (auto point out)*

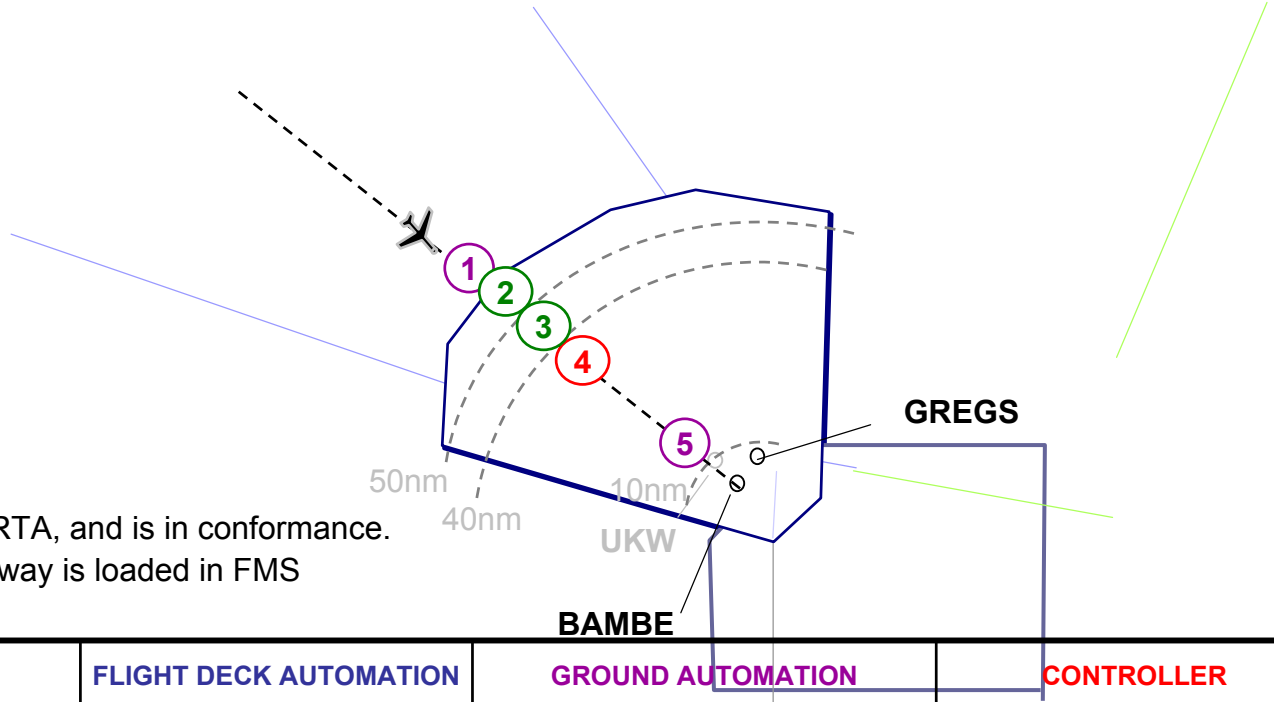
2. Aircraft cannot meet RTA (or other meter fix constraint)



Flight crew reports inability to meet RTA (or other constraint) and communicates preferences. Controller chooses solution from among the following:

- Controller assigns new RTA
  - Flight crew may need to absorb large delay if request is made very late, since the controller's options will be limited (10+ minutes)
  - Flight crew will receive an RTA that they can meet (requirement)
- Within proscribed limits specified in LOA, e.g., 12-13,000', Center controller issues revised TRACON entry clearance/constraints to flight crew ***without*** TRACON coordination.
- If compliance error exceeds LOA limits, Center controller contacts TRACON and requests permission for aircraft to enter (e.g., at 14,000'). If approved, flight crew enters on agreed altitude. TRACON approved only when "reasonable" (will work out later how that decision is made).

3. AFR-IFR Transition

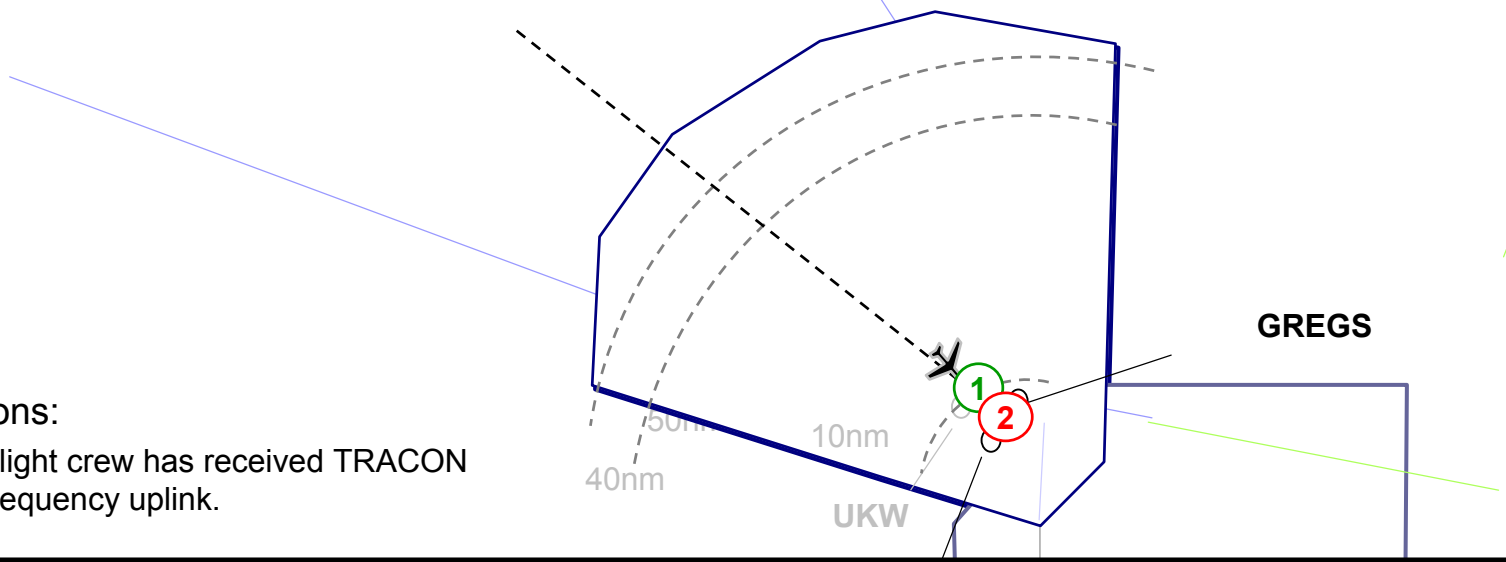


Preconditions:

- Aircraft has received RTA, and is in conformance.
- Complete route to runway is loaded in FMS

EVENT#	FLIGHT CREW	FLIGHT DECK AUTOMATION	GROUND AUTOMATION	CONTROLLER
1			Uplink UKW frequency "Contact ZFW on 133.25 and report RTA status"	
2	Receives message and determines RTA conformance			
3	Flight crew checks in with conformance status before 40nm DME BAMBE: "Center, NASA123 is with you on BAMBE RTA"			
4				Controller acknowledges checkin, and verifies RTA conformance. "NASA 123, copy RTA".
5			Uplink TRACON frequency "Contact Approach on 118.1"	

4a. TRACON /IFR clearance timing (at or before meter fix)



Preconditions:

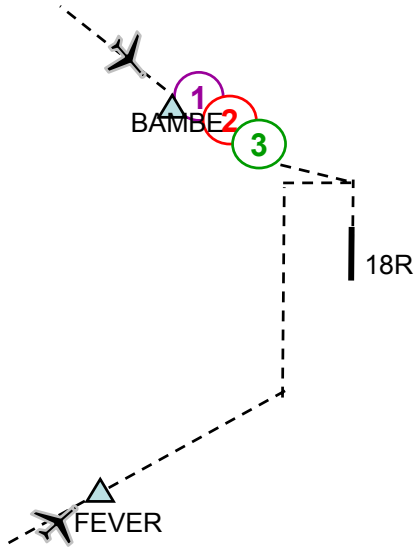
- Flight crew has received TRACON frequency uplink.

EVENT#	FLIGHT CREW	FLIGHT DECK AUTOMATION	GROUND AUTOMATION	CONTROLLER
1	Check in with TRACON: "Approach, NASA123 is with you…			
2				"NASA123, after BAMBE descend via the YOHAN 18R transition"
3	"Roger…" Pilot ***might*** arm AFR to IFR status switch (may or may not be prompted, e.g. in prior uplink)			
4		State change triggered by sequencing BAMBE waypoint, and is broadcast (ADS-B)		
5			Indicates status change ***or*** alerts controller to incorrect status	
6				

4b. TRACON /CE-11 Spacing Clearance timing

Preconditions:

- Aircraft coming from CE-5 problem have received “after *[meter fix]* descend via…” clearance.
- Aircraft flying TRACON-only problem will “pop-up” as IFR aircraft ~15nm outside meter fix in handoff status for TRACON controller. Controller accepts handoff before aircraft crosses fix.



EVENT#	FLIGHT CREW	FLIGHT DECK AUTOMATION	GROUND AUTOMATION	CONTROLLER
1 @ meter fix			After aircraft crosses meter fix, runway threshold schedule is frozen, and advisory presented to controller	
2				Clearance (voice or datalink): “NASA123, cleared to follow AAL346, maintain 90sec in trail. STA at 18R is 12:03:25Z”
3	Enter clearance data into automation (lead, time, STA)			
4				
5				
6				

5. Meter fix / runway threshold schedule relationship

- Meter fix schedule is constructed based on TRACON routing, forecast winds, runway assignment and spacing matrix